Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for performing electrophoresis comprising:

providing a plurality of sample fragments collectively having a first range of sizes, ~~the~~ each of the sample fragments being tagged with a dye selected from a first group ~~number~~ of dyes, a fluorescence spectrum of the dye of each sample fragment being indicative of a property of that sample fragment;

providing a plurality of reference fragments collectively having a second range of sizes which does not overlap with the first range of sizes, ~~the~~ each reference fragment ~~fragments of substantially similar sizes within the second range~~ being tagged with a ~~common~~ dye selected from the ~~from among said~~ first group ~~number~~ of dyes, reference fragments of substantially similar size being tagged with a common dye;

combining the sample fragments and the reference fragments into a common volume;

causing the sample fragments and the reference fragments within the common volume to separate along a common separation lane such that the sample fragments and the reference fragments are separated from one another in at least one of time and space;

optically detecting a fluorescence spectrum comprising a respective fluorescence intensity at each of a plurality of wavelengths from each of the separated sample and reference fragments;

determining first color calibration information based upon the fluorescence spectra of the reference fragments; and

determining at least one property of the sample fragments based upon the first color calibration information and the fluorescence spectra of the sample fragments.

2. (Original) The method according to claim 1, wherein the first and second ranges of sizes correspond to first and second ranges of lengths of the sample and reference fragments.

3. (Original) The method according to claim 2, wherein the sample and reference fragments comprises sequences of nucleotides.

4. (Original) The method according to claim 1, wherein the plurality of reference fragments comprise a first number of groups of reference fragments, reference fragments within each group having a substantially similar size.

5. (Original) The method according to claim 4, wherein the reference fragments comprise a sequence of nucleotides.

6. (Original) The method according to claim 5, wherein the reference fragments within each group comprises nucleotides having identical lengths.

7. (Original) The method according to claim 6, wherein the lengths of reference fragments within the groups are unevenly spaced.

8. (Original) The method according to claim 5, wherein lengths of nucleotides in any one group differ from lengths of nucleotides in any other group by at least five nucleotides.

9. (Original) The method according to claim 5, wherein lengths of nucleotides in any one group differ from lengths of nucleotides in any other group by at least ten nucleotides.

10. (Original) The method according to claim 5, wherein lengths of nucleotides in any one group differ from lengths of nucleotides in any other group by at-least twenty nucleotides.

11. (Original) The method according to claim 5, wherein lengths of nucleotides in any one group differ from lengths of nucleotides in any other group by at least forty nucleotides.

12. (Original) The method according to claim 1, wherein the largest sample fragment is smaller than the smallest reference fragment.

13. (Original) The method according to claim 1, wherein the largest reference fragment is smaller than the smallest sample fragment.

14. (Original) The method according to claim 1, wherein the first color calibration information is calculated for each of a plurality of separation lanes.

15 – 20. (Cancelled)

21. (Currently amended) A method for performing electrophoresis comprising:

providing a plurality of sample fragments collectively having a first range of sizes, ~~the~~ each of the sample fragments being tagged with a dye selected from a first group ~~number~~ of dyes, a fluorescence spectrum of the dye of each sample fragment being indicative of a property of that sample fragment;

providing a plurality of reference fragments collectively having a second range of sizes which does not overlap with the first range of sizes, each of at least some reference fragments of different size being tagged with a dye selected from the first group of dyes, the fluorescence spectrum of the dyes of the different sized reference fragments being different;

combining the sample fragments and the reference fragments into a common volume;

causing the sample fragments and the reference fragments within the common volume to separate along a common separation lane such that the sample fragments and the reference fragments are separated from one another;

optically detecting a fluorescence spectrum comprising a respective fluorescence intensity at each of a plurality of wavelengths from each of the separated sample and reference fragments;

determining first color calibration information based upon the fluorescence spectra of the reference fragments; and

determining at least one property of the sample fragments based upon the first color calibration information and the fluorescence spectra of the sample fragments.